

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): A. Yu and Y. Go  
Assignee: NanoStar Corporation  
Title: Dual Floating Gates Non-volatile Electrically Alterable Memory Cell  
for Storing Multiple Data  
Serial No.: 10/801,789 Filing Date: March 16, 2004  
Examiner: A. Mai Group Art Unit: 2814  
Docket No.: M-16550 US

San Jose, California  
May 27, 2008

Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION OF DR. SIMON WONG**

Dear Sir:

I, Simon Wong, hereby declare:

1. I received a Bachelor of Electrical Engineering degree in 1975 and a Bachelor of Mechanical Engineering in 1976 from the University of Minnesota, and a Master of Science degree in 1978 and a Doctor of Philosophy degree in 1983 from the University of California, Berkeley.
2. I am currently Professor of Electrical Engineering, at the Department of Electrical Engineering, Stanford University, Stanford, California.
3. My area of expertise is the design and fabrication of integrated circuits, in which I have published more than two hundred (200) technical papers and journal articles.
4. The claimed subject matter of the above-referenced patent application is within my area of expertise.

LAW OFFICES OF  
MacPherson, Ryan, Chen &  
Hend LLP

1762 Technology Drive, Suite 226  
San Jose, CA 95129  
(408) 392-0020  
FAX: (408) 392-0302

5. I have reviewed the Office Action ("Office Action") by Examiner Mai of the United States Patent and Trademark Office in the above-referenced patent application that was mailed on December 27, 2007.

6. I have reviewed U.S. Patent 6,018,178 ("Sung"), U.S. Patent 6,271,089 ("Chen") and U.S. Patent 5,576,232 ("Hong") upon which Examiner Mai relied in the Office Action for his rejection of independent Claims 1, 41 and 55 of the above-referenced patent application.

7. Sung shows in Figure 9 an N-type memory device that is programmed, using the Fowler-Nordheim injection mechanism.

8. Claims 1, 41 and 55 of the above-referenced patent application, however, each recite a memory device that is programmed using a soft-avalanche breakdown of a diffusion-semiconductor junction, which is a different mechanism than Fowler-Nordheim injection.

9. Therefore, I disagree with Examiner Mai that the memory device of Claim 1 of the above-referenced patent application can be achieved merely by reversing the conductivity of the memory device shown in Sung's Figure 9.

10. For the same reason, I disagree with Examiner Mai that the memory device of Claim 41 of the above-referenced patent application can be achieved merely by reversing the conductivity of the memory device shown in Sung's Figure 9, as modified by Chen in the manner articulated by the Examiner in paragraph 5 of the Office Action.

11. For the same reason, I disagree with Examiner Mai that the memory device of Claim 55 of the above-referenced patent application can be achieved merely by reversing the conductivity of the memory device shown in Sung's Figure 9, as modified by Hong in the manner articulated by the Examiner in paragraph 7 of the Office Action.

The above statements that are made on my own knowledge are true, and which are made on information and belief are believed to be true. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. 1001) and may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,



Simon Wong, Ph.D.  
Professor of Electrical  
Engineering  
Department of Electrical  
Engineering  
Stanford University  
Stanford, California